

# Christopher R. Culpepper

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[www.github.com/cculpepper](http://www.github.com/cculpepper)

**CAREER OBJECTIVE** To continue my career in the field of Systems or Computer Engineering designing electronic hardware, working in the RF domain, or creating embedded software, preferably in aerospace.

**EXPERIENCE** *Systems Engineer* *July 2013 - Present*

General Dynamics Mission Systems, Pittsfield MA

- Performed integration and repair operations on legacy hardware
- Diagnosed build issues with hardware and software installations
- Performed software and systems testing on weapon control software
- Managed requirements and test cases
- Developed automated testing tracker that was used to present testing progress to management

*Test Engineer Co-op*

*January 2016 - May 2016*

Space Exploration Technologies, Hawthorne CA

- Created software to automate the creation of trouble reports
- Developed tests to test flight avionics hardware
- Troubleshoot issues with avionics test racks

*Computer Engineering Lab Teaching Assistant*

*January 2015 - May 2017*

Computer Engineering Department, RIT, Rochester, NY

- Responsible for grading reports and assisting with ARM assembly and digital IC design

## PROJECTS

*High Altitude Balloon Telemetry Tracker*

- Personally developed hardware and software design and implementation
- Developing radio board to have the ability to use FSK, AFSK, or audio-based protocols
- Utilized multiple PCBs in order to separate functionality and increase reusability
- Can communicate GPS and other sensor data to the Amateur Radio APRS network

*Wideband Oxygen Sensor Controller*

- Designed, built and programmed sensor controller that measured oxygen concentration
- Incorporated PID loops to keep a sensor at a constant temperature and oxygen concentration
- Could have been calibrated to measure accurate oxygen concentrations

*Assembly Language Pong Game*

- Created a 1.5D Pong game for a school project in HCS12 assembly
- Required HCS12 assembly, PWM, ADC and digital output

*Radio-Internet Hotspot Transceiver (Multidisciplinary Senior Design)*

- Worked as a team leader to complete self-appointed tasks
- Device acted as an audio bridge between RF and the Allstar radio network
- Completed entire design process from customer requirements to prototyping and handoff.

## AWARDS & SKILLS

Eagle Scout

A+ Certified

Languages & Software:

C  
Python  
Microsoft Office  
Linux  
Kicad PCB Design Software

Visual Basic for Applications (VBA)  
VHDL  
ARM & HCS12 Assembly  
DOORs Requirement Management  
Networking Equipment Configuration

## EDUCATION

*Bachelor of Science, Computer Engineering* GPA: 3.03

Rochester Institute of Technology, Rochester NY, Graduated May 2017

Interface and Digital Electronics  
Data Communication and Networks  
Introduction to Software Engineering  
Assembly Language Programming

Digital IC Design  
Cyborg Theory  
HW & SW Design for Crypto Applications  
Introduction to Harmonica and the Blues

## COMMUNITY SERVICE

*Assistant Scoutmaster at Boy Scout Troop 88, North Adams, MA*

- Mentored Scouts to achieve rank and acquire valuable life skills

*Radio Communication at Multiple Road Rallies*

- Operated in a high-stress environment to prevent accidents and mistakes
- Responsible for maintaining communication for racing stages and to central management
- Relayed pertinent information to competitors, stage captain and race officials

## PERSONAL INTERESTS AND HOBBIES

Working Towards Pilot Licence  
Amateur Radio Extra  
K2GXT RIT Amateur Radio Club  
Motorcycle and Automobile repair

Camping and hiking  
Film Photography  
Achieving Private Pilot Licence  
Licked Thing That Was in Space